VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTH CENTRAL REGIONAL OFFICE

STATEMENT OF LEGAL AND FACTUAL BASIS
FOR PROPOSED PERMITTING ACTION
UNDER 9 VAC 5 Chapter 80 Article 1 (TITLE V – CLEAN AIR ACT)

APPLICANT:

VA-30871 AIRS ID 51-143-0123
Multitrade of Pittsylvania County, LP
P.O. Box 2001
Hurt, VA 24563-0001

FACILITY LOCATION:

Jay Bird Hill, Hurt, Virginia (Pittsylvania County)
UTM Coordinates: 4107.750 km North, 653.250 km East

FACILITY DESCRIPTION:

Multitrade of Pittsylvania County, LP, Standard Industrial Classification (SIC) Code 4911, is an independent power producer that produces electricity for sale to Virginia Power. The facility includes three wood-fired stoker boilers with associated wood and ash handling systems. The boilers are spreader stokers with a rated heat input of 373.7 MMBtu/hr each. Each boiler is equipped with a selective non-catalytic reduction (SNCR) system for NOx removal and a multicyclone/electrostatic precipitator in combination for particulate control. Exhaust gases from the boilers are ducted to one common stack and vented to the atmosphere. Continuous emission monitors (CEMs) are used to monitor emissions of NOx from each boiler and a continuous opacity monitor measures opacity from the combined boiler exhausts.

Wood is delivered to the facility in truck trailers. Wood handling operations include wood conveying and storage. Ash generated in the boilers is conveyed to the ash storage silo. The ash from the ash storage silo is loaded to trucks for off-site disposal. Dust suppression measures for this material handling system include water sprays, a fabric filter and conveyor covers.

The facility also has one small diesel generator, rated at 14.68 MMBtu/hr which is used only infrequently when the plant needs to generate its own electricity.

This facility conducted initial performance testing in June of 1994. The last inspection conducted at the facility by DEQ personnel is dated July 17, 2001 and indicates compliance with the permit. The permit was amended on December 9, 1999 to change the definition of wood approved for combustion in the boilers to include particleboard. An emission inventory update for calendar year 2001 was submitted and appropriate fees remitted.

EMISSIONS SUMMARY:

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
CRITERIA POLLUTANTS	POTENTIAL EMISSIONS (12/9/99 permit limits)	2003 ACTUAL EMISSIONS
PM	96.4	20.7
PM_{10}	94.5	20.7
Nitrogen Oxides (NOx)	482.1	236.6
Sulfur Dioxide (SO_2)	77.1	9.8
Carbon Monoxide (CO)	1687.3	866.6
Volatile Organic Compounds (VOC)	337.5	22.8

TITLE V PROGRAM APPLICABILITY BASIS:

Multitrade of Pittsylvania County, LP has the potential to emit over 100 tons per year, each, of NOx, VOC and CO and is therefore required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 9 VAC 5 Chapter 80 Article 1.

LEGAL AND FACTUAL BASIS FOR PERMIT CONDITIONS:

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the Commonwealth of Virginia Federal Operating Permit Regulations for the purposes of Title V of the Federal Clean Air Act (9 VAC 5 Chapter 80 Article 1), and underlying applicable requirements in other state and federal rules. Applicable requirement means all of the following as they apply to emission units in a Title V source:

a. Any standard or other requirement provided for in the State Implementation Plan or the Federal Implementation Plan, including any source-specific provisions such as consent agreements or orders.

b. Any term or condition of any preconstruction permit issued pursuant to 9 VAC 5-80-10, Article 8 (9 VAC 5-80-1700 et seq.) of this part or 9 VAC 5-80-30 or of any operating permit issued pursuant to 9 VAC 5 Chapter 80 Article 5, except for terms or conditions derived from applicable state requirements or from any requirement of these regulations not included in the definition of applicable requirement.

c. Any standard or other requirement prescribed under these regulations, particularly the provisions of 9 VAC 5 Chapter 40 (9 VAC 5-40-10 et seq.), 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) or 9 VAC 5 Chapter 60 (9 VAC 5-60-10 et seq.), adopted pursuant to requirements of the federal Clean Air Act or under § 111, 112 or 129 of the federal Clean Air Act.

d. Any requirement concerning accident prevention under § 112(r)(7) of the federal Clean Air Act.

e. Any compliance monitoring requirements established pursuant to either § 504(b) or § 114(a)(3) of the federal Clean Air Act or these regulations.

f. Any standard or other requirement for consumer and commercial products under § 183(e) of the federal Clean Air Act.

g. Any standard or other requirement for tank vessels under § 183(f) of the federal Clean Air Act.

h. Any standard or other requirement in 40 CFR Part 55 to control air pollution from outer continental shelf sources.

i. Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the federal Clean Air Act, unless the administrator has determined that such requirements need not be contained in a permit issued under this article.

j. With regard to temporary sources subject to 9 VAC 5-80-130, (i) any ambient air quality standard, except applicable state requirements, and (ii) requirements regarding increments or visibility as provided in Article 8 (9 VAC 5-80-1700 et seq.) of this part.

k. Any standard or other requirement of the acid deposition control program under Title IV of the Clean Air Act or the regulations promulgated thereunder.

l. Any standard or other requirement governing solid waste incineration under §129 of the Clean Air Act.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 9 VAC 5 Chapter 80 Article 1 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the state but is not federally-enforceable is identified in the draft Title V permit as such.

Included in the above general listing are the following specific federal regulations which are applicable to this facility:

40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (applicable to Unit Nos. 101, 102 and 103)

The conditions from the December 9, 1999 permit have been placed in the Title V permit as applicable requirements with the exception of the initial notification requirements and the initial testing requirements.

Periodic Monitoring

Three Spreader Stoker Wood-fired Boilers

New Source Performance Standard (NSPS) 40 CFR 60 Subpart Db applies to the three spreader stoker boilers at the facility. Emission limits in the NSR permit were derived by using BACT and are more restrictive than the Subpart Db standards. The NSR permit limits from the permit dated December 9, 1999 have been streamlined into the Title V permit. Wood is the only approved fuel for these boilers. Because the boilers do not burn coal, oil, or natural gas the Subpart Db standards for SO_2 and NOx do not apply. The Subpart Db standards for particulate matter do apply to the boilers. A multicyclone and electrostatic precipitator in combination are required to be used for particulate control. The Subpart Db particulate standard is 0.10 $lb/10^6$Btu, however the limit in this permit is 0.02 $lb/10^6$Btu. Opacity is limited by the NSR permit to 10 percent, while the Subpart Db standard is 20 percent. Though not subject to the Subpart Db standard, the NOx emission limit in the permit of 0.10 $lb/10^6$Btu is equivalent to the lowest standard in Subpart Db. NOx is controlled by the use of selective non-catalytic reduction (SNCR). Because there is little sulfur in wood the SO_2 emission limit in the permit of 0.016 $lb/10^6$Btu is far below the Subpart Db standard. SO_2 emission limits are verified through quarterly sulfur analysis of the wood fuel, with records of these analyses maintained by the permittee.

A continuous opacity monitor (COM) as required by Subpart Db is included in the permit (Conditions III.C.1 thru 3). The data collected by the COM will be used as an indicator of a potential excess particulate emission episode. NOx and either CO_2 or O_2 emissions are monitored using continuous emissions monitors (CEMs) that comply with the requirements of Subpart Db (Conditions III.C.1 thru 3). Excess emissions reports, as required by Subpart Db, are required to be submitted on a semi-annual basis (Conditions III.D.1 & 2, VIII.C.3, & VIII.F.3). Records required by Subpart Db must be maintained by the permittee (Conditions III.E.2 & VIII.C.1 & 2).

Stack testing has shown that the VOC emissions from the boilers are less than 10 percent of the permitted limit. It is believed that the margin of compliance for VOC emissions is sufficient and no additional monitoring needs to be required.

The permittee has successfully demonstrated through stack testing that the boilers meet the emission limits for particulates and CO. The annual emission limits for these boilers is based on the enforceable permit limitation of burning no more than a total of 1,048,512 tons of wood per year for the entire facility. In order to assure that the emission limits for particulates and CO are met in the future the source is required by the Title V permit to stack test each of the boilers for PM, PM-10, and CO at least one time during the 5 year permit term.

The hazardous air pollutant emission limits for the wood-fired boilers have been established based on agreed-upon emission factors used to write the original PSD permit. Wood consumption records are adequate to demonstrate compliance with these limits.

Ammonia emission limits have been based on an allowable ammonia slip of 20 ppm in the stack. Ammonia and formaldehyde emission limit compliance has been verified through stack test results. Compliance stack tests were completed in 1996, demonstrating hourly emission rates below permit limits as follows:

Pollutant	Permit Limit	Stack Test Results (lb/hr)		
	lb/hr	Boiler 101	Boiler 102	Boiler 103
ammonia	10.0	5.3	5.2	6.0
formaldehyde	0.37	0.245	0.073	0.243

Auxiliary Generator

The auxiliary generator is not subject to any current NSPS Subparts, nor are any CEMs or COMs required. This generator is used only periodically or infrequently when the plant has to generate its own electricity. Emission compliance can be demonstrated from fuel use records as they are kept daily when the generator is in use. Annual emission limits are based on the auxiliary generator consuming no more than 24,000 gallons per year of number 2 fuel oil. The facility maintains records of the sulfur content of each fuel shipment received. The auxiliary generator is limited to burning only number 2 fuel oil and the sulfur content of the fuel is limited to 0.3 percent by weight. When the generator is in operation, the source will perform and record a visual observation check for opacity. If opacity is observed, the permittee will take corrective action so that the generator resumes operation with no visible emissions or perform a visible emissions evaluation (VEE) in accordance with Method 9 of 40 CFR Part 60, Appendix A to verify that the generator is operating in compliance and keep appropriate records of the event.

Materials Handling Systems

The wood handling system is not subject to any current NSPS Subparts. At least once per week, the source will perform and record a visual observation check of the wood handling equipment enclosures and fugitive emissions sources for opacity. If opacity is observed during the visual observation or at any other time, the permittee will take corrective action so that the unit resumes operation with no visible emissions or perform a VEE in accordance with Method 9 of 40 CFR Part 60, Appendix A to verify the unit is operating in compliance and keep appropriate records of the event. If the wood handling system is idle, the source denotes in the log that the system was not operational.

The ash handling system is not subject to any current NSPS Subparts. The existing permit limits the opacity from the fabric filter exhausts to 5% and fugitive opacity to 10% or less, but does not require the use of a COMs. At least once per week, the source will perform and record a visual observation check of the ash handling equipment enclosures, fabric filter exhaust vent, and fugitive emissions sources for opacity. If opacity is observed during the visual observation or at any other time, the permittee will take corrective action so that the unit resumes operation with no visible emissions or perform a VEE in accordance with Method 9 of 40 CFR Part 60, Appendix A to verify the unit is operating in compliance and keep appropriate records of the event. If the ash handling system is idle, the source denotes in the log that the system was not operational.

REQUEST FOR VARIANCES OR ALTERNATIVES:

None

Public participation is not required for administrative permit amendments.